

NEW MEXICO ENVIRONMENT DEPARTMENT GROUND WATER QUALITY BUREAU

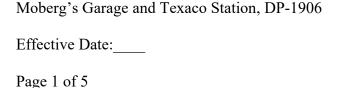
UNDERGROUND INJECTION CONTROL GENERAL DISCHARGE PERMIT



Certified Mail- Return Receipt Requested

Facility Name:	Moberg's Garage/Texaco Station State Lead Site New Mexico Highway 161, Watrous, New Mexico Contract #19 667 3200 0010
Facility Location:	Injection of oxidant is proposed along New Mexico Highway 161 in Watrous (see attached Injection Plan)
Legally Responsible Party:	NMED Petroleum Storage Tank Bureau 2905 Rodeo Park Drive East, Building 1 Santa Fe NM, 87505 Tel (505) 476-4397
	Point of Contact: Mike McVey, P.G. EA Engineering, 320 Gold Avenue Suite 1300 Albuquerque, NM 87102 (505) 224-9013 x1530 mmcvey@eaest.com
Remediation Oversight Agency Contact:	NMED PSTB Attn: Susan von Gonten 505-476-4389
Remediation or Injection Plan Identification:	Moberg's Garage/Texaco Station Final Remediation Plan
Permitting Action:	New
PPS Contact	Jason Herman, 505-827-2713
EFFECTIVE DATE:	TERM ENDS:

Michelle Hunter Chief, Ground Water Quality Bureau



I. UIC GENERAL DISCHARGE PERMIT

The New Mexico Environment Department (NMED) Ground Water Quality Bureau (GWQB) issues this Underground Injection Control General Discharge Permit (UIC Permit) for the subsurface emplacement of additive fluids through a Class V UIC injection wells for the purpose of facilitating remediation of vadose zone and/or ground water. The GWQB issues this UIC Permit to NMED PSTB (Permittee) pursuant to the New Mexico Water Quality Act (WQA), NMSA 1978 §§74-6-1 through 74-6-17, and the New Mexico Water Quality Control Commission (WQCC) Ground and Surface Water Protection Regulations, 20.6.2 NMAC.

In issuing this UIC Permit, the GWQB has determined that the requirements of Subsection C of 20.6.2.3109 NMAC have been met. The activities authorized by this UIC Permit are principally governed by the Moberg's Garage/Texaco Station Final Remediation Plan (Injection Plan), under the authority of STATUTES/REGULATIONS, with oversight by the Petroleum Storage Tank Bureau Remedial Action Program. Compliance with this UIC Permit requires compliance with the terms, requirements, and conditions of the Injection Plan. The term of this UIC Permit shall be no longer than five years from the effective date of this UIC Permit.

The injection activities, the location of the injection site, the type of injection and quantities of additives being used are briefly described as follows:

<u>Injection Activities (summary: including injection well type, number of wells, and injection frequency)</u>

Copy of the Injection Plan Attached (required): X

The specified amendment is Regenesis® Oxygen Release Compound (ORC) Advanced® (calcium hydroxide oxide, mono- and dipotassium phosphate). The ORC Advanced® will be batch mixed with water to form a slurry and immediately injected via direct push injection tools. A field log of number and volume of batches will be maintained. The batch mixing will be to 25 percent (%) solids by mass, as per Regenesis® specification. This is 10 pounds (lbs) of ORC Advanced to 3.6 gallons (30 lbs) of water. The injection will be through approximately 78 direct push boreholes. The design mass of ORC Advanced is approximately 8,260 lbs, so about 106 lbs of ORC Advanced (17 lbs/ft over the 6-foot vertical treatment thickness) will be injected into each of the 78 boreholes into an approximately 6-foot interval, as shown on Drawings G-2 and C-1. At 25% solids, the total injectate volume per borehole will be about 38 gallons, or ~6 gallons per vertical foot of injection. Subsequent "hot spot" treatments can be performed, if necessary, based on results of groundwater quality monitoring. EA will notify the GWQB 30 days in advance of any such subsequent "hot spot" injections.

Injection Site Information

Depth to Ground Water: 9 to 13 feet

Existing concentration of total dissolved solids (TDS) in ground water: <1,000 mg/L (estimated from specific conductance)

Location: Along NM Highway 161 between Oliver Street and Union Street

Moberg's Garage and Texaco Station, DP-1906
Effective Date:
Page 2 of 5
County: Mora Latitude: 35° 47' 26" Longitude: 104° 58' 55" Map Showing Area of Injection Sites Attached (required) -: X
Additives Being Used (including volumes, manufacturer, and mixing ratios)
REGENESIS ORC Advanced® (calcium hydroxide oxide, calcium hydroxide, mono- and dipotassium phosphate). The batch mixing will be to 25% solids as per Regenesis® specification. This is 10 lbs of ORC Advanced to 3.6 gallons (30 lbs) of water. The injection will be through 78 direct push boreholes. The design demand of ORC Advanced is 8,260 lbs, so about 106 lbs of ORC Advanced (17 lbs/ft over the 6-foot vertical treatment thickness) will be injected into each of the 78 boreholes as shown on Drawings G-2 and C-1. At 25% solids, the total injectate volume per borehole will be about 38 gallons, or ~6 gallons per vertical foot of injection. Safety Data Sheets and Regenesis Technical Specification Sheets for ORC Advanced are attached.
Anticipated Precipitation, Dissolution, Adsorption, and Desorption Products
The ORC Advanced will create aerobic conditions and raise the oxidation reduction potential (ORP) in the groundwater, so we do not expect local dissolution of redox metals such as manganese and ferrous iron. The ORC Advanced will be injected as a solid phase (slurry) that will slowly dissolve in groundwater releasing oxygen to facilitate aerobic biodegradation. We do not anticipate any deleterious reactions or daughter products as a result of this injection.
This UIC Permit consists of the complete and accurate completion of this UIC Permit form as determined by the GWQB. Issuance of this UIC Permit does not relieve the Permittee of the responsibility to comply with the WQA, WQCC Regulations, and any other applicable federal, state and/or local laws and regulations, such as zoning requirements and nuisance ordinances.
<u>Signatures</u>
Signature must be that of the person listed as the legally responsible party on this application.
I, the applicant, attest under penalty of law to the truth of the information and supporting documentation contained in this application for an Underground Injection Control General Discharge Permit.
Applicant's Signature
Signature: Date: 02/13/2020
Printed Name: Vener Mustafin (for EA Engineering, Science, and Technology, Inc. PBC) Title: Project Engineer

Moberg's Garage and Texaco Station, DP-1906
Effective Date:
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II. FINDINGS

In issuing this UIC Permit, GWQB finds:

- 1. The Permittee is injecting fluids so that such injections will move directly or indirectly into ground water within the meaning of Section 20.6.2.3104 NMAC.
- 2. The Permittee is injecting fluids so that such fluids will move into ground water of the State of New Mexico which has an existing concentration of 10,000 mg/L or less of TDS within the meaning of Subsection A of 20.6.2.3101 NMAC.
- 3. The Permittee is using a Class V UIC well as described in 20.6.2.5002(B)(5)(d)(ii) NMAC for in situ ground water remediation by injecting a fluid that facilitates vadose zone or groundwater remediation.
- 4. The Permittee is injecting fluids into groundwater in order to achieve the remediation goals identified in the Injection Plan.

III. AUTHORIZATION TO DISCHARGE

The Permittee is authorized to inject chemical additives into ground water in accordance with this UIC Permit and the Injection Plan under the oversight of Petroleum Storage Tank Bureau Remedial Action Program.

[20.6.2.3104 NMAC, Subsection C of 20.6.2.3106 NMAC, Subsection C of 20.6.2.3109 NMAC]

IV. CONDITIONS

The conditions of this UIC Permit shall be complied with by the Permittee and are enforceable by GWQB.

1. The Permittee shall perform remediation activities in accordance with the Injection Plan and shall notify GWQB of any changes prior to making them.

[20.6.2.3107 NMAC]

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Effective Date:

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2. The Permittee shall monitor the injection activities and their effects on ground water quality as required by the Injection Plan and shall provide GWQB with electronic copies of the required reporting and any pertinent documentation of activities at the site.

[20.6.2.3107.A NMAC, 20.6.2.3109.A NMAC]

3. If the GWQB or the Permittee identifies any failure of the Injection Plan or this UIC Permit to comply with 20.6.2 NMAC not specifically noted herein, GWQB may require the Permittee to submit a corrective action plan and a schedule for completion of corrective actions to address the failure.

Additionally, the GWQB may tallow the Permittee to submit a proposed modification to the Injection Plan, this UIC Permit, or both.

[20.6.2.3107.A NMAC, 20.6.2.3109.E NMAC]

4. ADDITIONAL MONITORING REQUIREMENTS – Groundwater quality monitoring will be performed quarterly on the site monitoring wells listed below. Well locations are provided on the attached Injection Plan (Drawing C-1), and surveyed coordinates of site wells are provided in the attached survey report.

South Injection Area (see Injection Plan): W-1, W-2, W-3, BMW-10, BMW-11, and BMW-16
North Injection Area: BMW-1, BMW-2, BMW-3, BMW-5, BMW-5R, BMW-8, BMW-18,
BMW-21, and BMW-22

5. TERMINATION – Within 30 days of completion of activities authorized by this UIC Permit the Permittee shall submit a closure report and a request to terminate the UIC Permit to the GWQB for its approval. The closure report shall identify how the injection well(s) was closed in accordance with the Injection Plan. The Permittee shall provide Petroleum Storage Tank Bureau Remedial Action Program with a copy of this closure report.

[20.6.2.5005 NMAC, 19.27.4 NMAC]

6. INSPECTION and ENTRY – The Permittee shall allow a representative of the NMED to inspect the facility and its operations subject to this UIC Permit and the WQCC regulations. The GWQB representative may, upon presentation of proper credentials, enter at reasonable times upon or through any premises in which a water contaminant source is located or in which are located any records required to be maintained by regulations of the federal government or the WQCC.

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Effective Date:
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The Permittee shall allow the GWQB representative to have access to, and reproduce for their use, any copy of the records, and to perform assessments, sampling or monitoring during an inspection for the purpose of evaluating compliance with this UIC Permit and the WQCC regulations.

Nothing in this UIC Permit shall be construed as limiting in any way the inspection and entry authority of GWQB under the WQA, the WQCC Regulations, or any other local, state or federal regulations.

[20.6.2.3107.D NMAC, NMSA 1978, §§ 74-6-9.B and 74-6-9.E]

7. MODIFICATIONS and/or AMENDMENTS – In the event the Permittee proposes a change to the injection plan that would result in a change in the volume injected; the location of the injections; or the concentration of the additives being injected by the facility, the Permittee shall notify GWQB prior to implementing such changes. The Permittee shall obtain approval (which may require modification of this UIC Permit) by GWQB prior to implementing such changes.

[20.6.2.3107.C NMAC, 20.6.2.3109.E and G NMAC]

8. COMPLIANCE with OTHER LAWS – Nothing in this UIC Permit shall be construed in any way as relieving the Permittee of the obligation to comply with all applicable federal, state, and local laws, regulations, permits or orders.

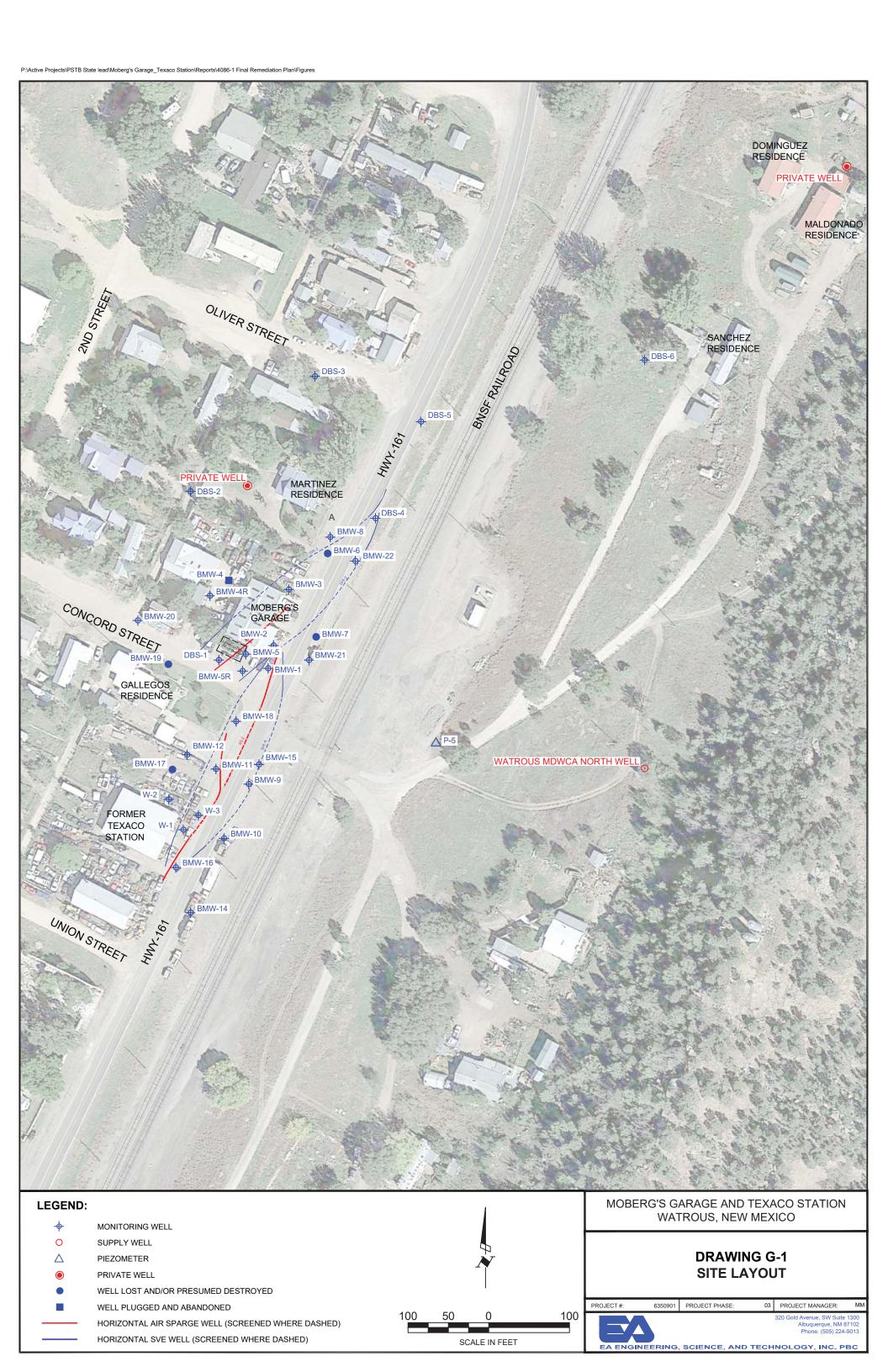
[NMSA 1978, § 74-6-5.L]

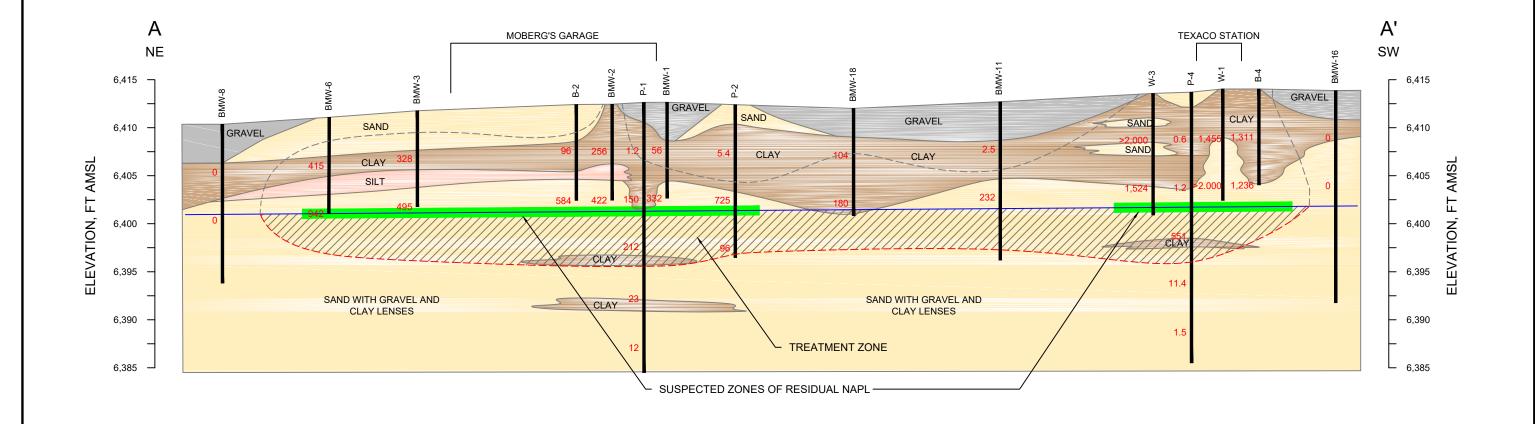
9. PERMIT FEES – Payment of permit fees is due at the time of UIC Permit approval. Permit fees shall be paid in a single payment remitted to GWQB no later than 30 days after the UIC Permit effective date.

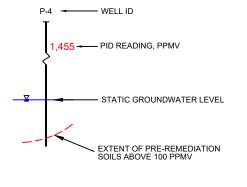
Permit fees are associated with issuance of this UIC Permit. Nothing in this UIC Permit shall be construed as relieving the Permittee of the obligation to pay all permit fees assessed by GWQB. A Permittee that ceases injecting or does not commence injecting during the term of the UIC Permit shall pay all permit fees assessed by GWQB. An approved UIC Permit shall be suspended or terminated if the facility fails to remit a payment by its due date.

[20.6.2.3114.F NMAC, NMSA 1978, § 74-6-5.K]

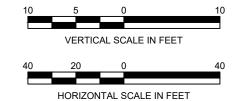
DRAWINGS







PID = PHOTOIONIZATION DETECTOR PPMV = PARTS PER MILLION BY VOLUME FT AMSL = FEET ABOVE MEAN SEA LEVEL NAPL = NON-AQUEOUS PHASE LIQUID



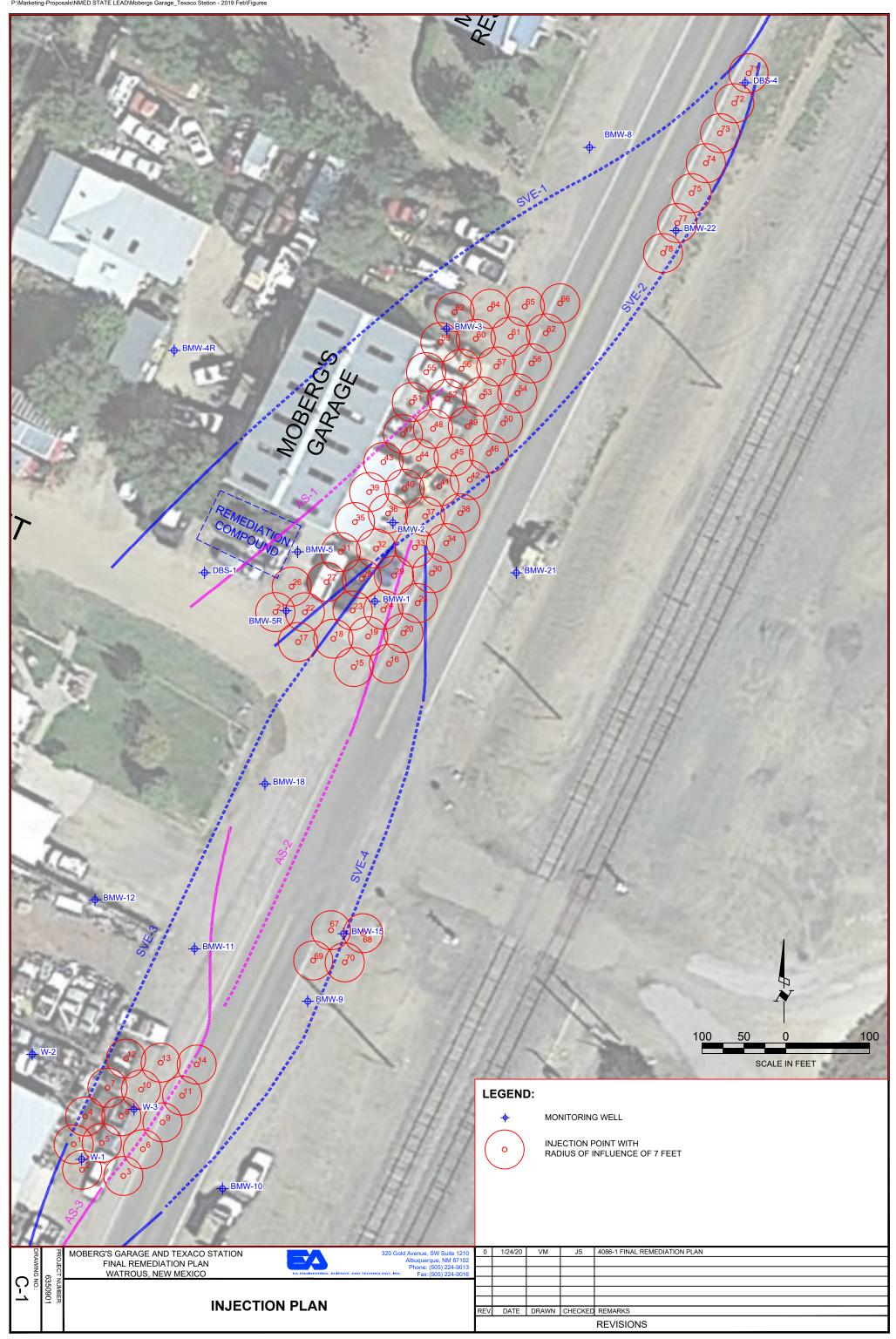
SOURCE: DBS&A

MOBERG'S GARAGE AND TEXACO STATION WATROUS, NEW MEXICO

DRAWING G-2 LONGITUDINAL SECTION SHOWING INJECTION ZONE

PROPOSAL PROJECT PHASE:





February 13, 2020 NMED GWQB	UIC DP Moberg's Garage and Texaco Station, Watrous, NM
	ORC ADVANCED® TECHNICAL DESCRIPTION



ORC Advanced® Technical Description

ORC Advanced[®] is an engineered, oxygen release compound designed specifically for enhanced, *in situ* aerobic bioremediation of petroleum hydrocarbons in groundwater and saturated soils. Upon contact with groundwater, this calcium oxyhydroxide-based material becomes hydrated producing a controlled release of molecular oxygen (17% by weight) for periods of up to 12 months on a single application.

ORC Advanced decreases time to site closure and accelerates degradation rates up to 100 times faster than natural degradation rates. A single ORC Advanced application can support aerobic biodegradation for up to 12 months with minimal site disturbance, no permanent or emplaced above ground equipment, piping, tanks, power sources, etc are needed. There is no operation or maintenance required. ORC Advanced provides lower costs, greater efficiency and reliability compared to engineered mechanical systems, oxygen emitters and bubblers.



Example of ORC Advanced

ORC Advanced provides remediation practitioners with a significantly faster and highly effective means of treating petroleum contaminated sites. Petroleum hydrocarbon contamination is often associated with retail petroleum service stations resulting from leaking underground storage tanks, piping and dispensers. As a result, ORC Advanced technology and applications have been tailored around the remediation needs of the retail petroleum industry and include: tank pit excavations, amending and mixing with backfill, direct-injection, bore-hole backfill, ORC Advanced Pellets for waterless and dustless application, combined ISCO and bioremediation applications, etc.

For a list of treatable contaminants with the use of ORC Advanced, view the Range of Treatable Contaminants Guide

Chemical Composition

- Calcium hydroxide oxide
- Calcium hydroxide
- Monopotassium phosphate
- Dipotassium phosphate

Properties

Physical state: SolidForm: Powder

• Odor: Odorless

Color: White to pale yellowpH: 12.5 (3% suspension/water)



ORC Advanced® Technical Description

Storage and Handling Guidelines

Storage

Store in a cool, dry place out of direct sunlight

Store in original tightly closed container

Store in a well-ventilated place

Do not store near combustible materials

Store away from incompatible materials

Provide appropriate exhaust ventilation in places where dust is formed

Handling

Minimize dust generation and accumulation

Keep away from heat

Routine housekeeping should be instituted to ensure that dust does not accumulate on surfaces

Observe good industrial hygiene practices

Take precaution to avoid mixing with combustibles

Keep away from clothing and other combustible materials

Avoid contact with water and moisture

Avoid contact with eyes, skin, and clothing

Avoid prolonged exposure

Wear appropriate personal protective equipment

Applications

- Slurry mixture direct-push injection through hollow rods or direct-placement into boreholes
- In situ or ex situ slurry mixture into contaminated backfill or contaminated soils in general
- Slurry mixture injections in conjunction with chemical oxidants like RegenOx or PersulfOx
- Filter sock applications in groundwater for highly localized treatment
- Ex situ biopiles

Health and Safety

Wash thoroughly after handling. Wear protective gloves, eye protection, and face protection. Please review the <u>ORC Advanced Safety Data Sheet</u> for additional storage, usage, and handling requirements.



www.regenesis.com 1011 Calle Sombra, San Clemente CA 92673 949.366.8000

February	13,	2020
NMED G	W(ρB

UIC DP Moberg's Garage and Texaco Station, Watrous, NM

WELL SURVEY DATA

SURVEYING CONTROL, INC.

131 Madison St. N.E. Albuquerque, NM 87108 (505) 266-0935 Fax (505) 266-9985

February 26, 2016

Attn: Tom Golden, PE Daniel B. Stephens & Associates, Inc. 6020 Academy Road, N.E. Ste. 100 Albuquerque, NM 87109

Re: Coordinates & Elevations for Monitoring Wells - Moberg's Garage / Texaco Station UST Site at Watrous, New Mexico

Dear Tom:

The following are the coordinates and elevations for the monitoring wells on the above referenced site. The coordinates are New Mexico State Plane Coordinates, East Zone - NAD 83 (1992), and have been adjusted to USC&GS Benchmark / NMDOT GPS Control Point õM 75ö (Coordinates for M 75 taken from NMDOT GPS Control Map for N.M.P. # G2BT3 Las Vegas-Springer prepared by William A. Bowers, NMPS 11765: Y = 1743582.615, X = 349069.137) The elevations are referred to NAVD 88, and have been adjusted to õM 75ö as well (Published Elevation = 6419.55ø). The coordinates & elevations below are expressed in US Survey Feet. The elevations shown below labeled õTop PVC Elev.ö were taken on the black Magic Marker spot on the north edge of the PVC well casing inside the outer cover. The coordinates shown below are to the center of the cap on each well inside the outer cover lid.

Well	Northing	Easting	Top PVC Elev.
DBS-1	1743760.79	348948.14	6416.18
DBS-2	1743948.77	348915.76	6416.40
DBS-3	1744107.31	349071.93	6413.48
DBS-4	1743932.24	349144.56	6414.26
DBS-5	1744050.71	349203.34	6413.73
DBS-6	1744121.28	349480.66	6413.99
W-1	1743552.49	348900.16	6417.66
W-2	1743590.52	348883.30	6418.36
W-3	1743570.11	348918.98	6417.25
BMW-1	1743749.91	349008.85	6416.13
BMW-3	1743846.58	349036.30	6415.41
BMW-4R	1743840.72	348938.71	6415.96
BMW-8	1743910.54	349088.32	6413.80
BMW-9	1743607.20	348981.71	6416.82
BMW-10	1743540.76	348950.03	6417.02
BMW-11	1743626.65	348941.69	6416.38

Moberg's Garage / Texaco Station Monitoring Wells (Cont.-)

Well	Northing	Easting	Top PVC Elev.
BMW-12	1743644.99	348906.73	6416.47
BMW-14	1743449.75	348907.08	6417.14
BMW-15	1743631.15	348995.05	6416.65
BMW-16	1743506.31	348889.70	6417.59
BMW-18	1743685.62	348968.19	6415.57
BMW-20	1743811.64	348848.80	6416.53
BMW-21	1743758.66	349058.96	6415.43
BMW-22	1743880.04	349118.88	6414.09
P-5	1743633.07	349189.04	6417.55

Please do not hesitate to call if you have any questions or if you need any additional information.

Sincerely,

Stephen J. Toler, PS

February 13, 2020 NMED GWQB	UIC DP Moberg's Garage and Texaco Station, Watrous, NM
NOTICE OF SUBMISSION O	F THE FINAL REMEDIATION PLAN

NOTICE OF SUBMISSION OF FINAL REMEDIATION PLAN

Dates of Notice: February 12th, 2020; February 19th, 2020

Notice is hereby given by EA Engineering, Science, and Technology, Inc. PBC of the submission of a Final Remediation Plan to the New Mexico Environment Department (NMED) Petroleum Storage Tank Bureau (PSTB), as follows:

- 1. The Final Remediation Plan proposes actions to remediate a release of petroleum or petroleum products into the environment.
- 2. The release occurred at Moberg's Garage and Texaco Station, Highway 161, Watrous, New Mexico.
- 3. The Final Remediation Plan proposes injection of Regenesis Oxygen Release Compound (ORC) Advanced® to facilitate aerobic biodegradation of residual contamination present in two hot spots that remain at the site.
- 4. A copy of the Final Remediation Plan can be viewed by interested parties at the NMED PSTB office located at 2905 Rodeo Park Drive East, Building 1, Santa Fe, New Mexico, 87505 and at the NMED field office located at 2538 Ridgerunner Road, Las Vegas, NM, 87701. In addition, the Final Remediation Plan and all applicable data may be viewed at the following website: https://cloud.env.nm.gov/waste/pages/search.php?search=%21collection2245&k=9b 546b8566. Services may be arranged for translation of documents, for interpreters, and for obtaining services for persons with disabilities by contacting the NMED PSTB Project Manager. TDD or TTY users, please access phone numbers using the New Mexico Relay Network, 1-800-659-1779 (voice) and 1-800-659-8331 (TTY users).
- 5. Comments on the plan may be sent to the NMED PSTB Project Manager by mail at New Mexico Environment Department Petroleum Storage Tank Bureau, Attn: Susan von Gonten, 2905 Rodeo Park Drive East, Building 1, Santa Fe, New Mexico, 87505; by telephone at (505) 476-4397; or e-mailed to: susan.vongonten@state.nm.us. Comments must be delivered by March 11, 2020. Comments sent to the project manager must also be mailed to the New Mexico Environment Department Secretary, Attn: Secretary Kenney, PO Box 5469, Santa Fe, NM 87502-5469. Please include the name of the site "Moberg's Garage and Texaco Station, Watrous, New Mexico" to ensure comments are correctly assigned to the site.

END OF PUBLIC NOTICE

AVISO DE PRESENTACIÓN DEL PLAN DE REMEDIACIÓN FINAL

Fechas de aviso: 12 de febrero de 2020; 19 de febrero de 2020

Por el presente aviso, EA Engineering, Science, and Technology, Inc. PBC notifica la presentación de un Plan de Remediación Final a la Oficina de Tanques de Almacenamiento de Petróleo (PSTB, por sus siglas en inglés) del Departamento de Medio Ambiente de Nuevo México (NMED, por sus siglas en inglés), como sigue:

- 1. El Plan de Remediación Final propone acciones para remediar una liberación de petróleo o productos del petróleo al medio ambiente.
- 2. La liberación ocurrió en Moberg's Garage y Texaco Station, Highway 161, Watrous, Nuevo México.
- 3. El Plan de Remediación Final propone la inyección de Regenesis Oxygen Release Compound (ORC, por sus siglas en inglés) Advanced® para facilitar la biodegradación aeróbica de la contaminación residual presente en dos lugares conflictivos que quedan en el sitio.
- 4. Una copia del Plan de Remediación Final puede ser vista por las partes interesadas en la oficina de PSTB del NMED ubicada en 2905 Rodeo Park Drive East, Building 1, Santa Fe, New Mexico, 87505 y en la oficina local del NMED ubicada en 2538 Ridgerunner Road, Las Vegas, NM, 87701. Además, el Plan de Remediación Final y todos los datos aplicables pueden ser vistos en el siguiente sitio web:

 https://cloud.env.nm.gov/waste/pages/search.php?search=%21collection2245&k=
 - 9b546b8566. Se pueden organizar servicios para la traducción de documentos, para intérpretes, y para obtener servicios para personas con discapacidades comunicándose con la gerente de proyecto de PSTB del NMED. Los usuarios de TDD o TTY, pueden acceder a los números de teléfono usando la Red de Retransmisión de Nuevo México, 1-800-659-1779 (voz) y 1-800-659-8331 (usuarios de TTY).
- 5. Los comentarios sobre el plan pueden enviarse a la gerente de proyecto de PSTB del NMED por correo a la Oficina de Tanques de Almacenamiento de Petróleo del Departamento de Medio Ambiente de Nuevo México, a la atención de: Susan von Gonten, 2905 Rodeo Park Drive East, Building 1, Santa Fe, Nuevo México, 87505; por teléfono al (505) 476-4397; o por correo electrónico a: susan.vongonten@state.nm.us. Los comentarios deben ser entregados a más tardar el 11 de marzo de 2020. Los comentarios enviados a la gerente de proyecto también deben ser enviados por correo al secretario del Departamento de Medio Ambiente de Nuevo México, a la atención del secretario Kenney, P.O. Box 5469,

Santa Fe, NM 87502-5469. Por favor incluya el nombre del sitio "Moberg's Garage and Texaco Station, Watrous, New Mexico" para asegurar que los comentarios sean asignados correctamente al sitio.

FIN DEL AVISO PÚBLICO

LAS VEGAS OPTIC 614 LINCOLN ST LAS VEGAS, NM 87701 (505) 425-6796 http://www.lasvegasoptic.com 2/10/2020 12:34:16 PM Sale

10175A02 Merchant ID: Batch ID#: 3204 Tran ID#: 1 Operator: 8355366 Credit Card: MasterCard *6842 Acct #: 010030 Auth Code: CVV2 match (M) CVV: Ref BRIC#:

Sergio Reyes-Dzul

\$ 346.87 USD Total:

059HHK86J675AKH24D3

Signature

I AGREE TO PAY THE ABOVE TOTAL AMOUNT ACCORDING TO THE CARD ISSUER AGREEMENT (MERCHANT AGREEMENT IF CREDIT VOUCHER).

2/10/2020, 10:35 AM 1 of 1